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An Inaugural Essay
on
Cholera,
For the degree of Doctor of Medicine
in
The University of Pennsylvania
by
John L. Wright of North Carolina

Philadelphia February 26th 1828.

1841

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The human fabric is a wonderful congeries, to each constituent of which is assigned the performance of some function conducive to the welfare of the general whole.

The faithful discharge of their appropriate offices by the several parts composing the animal machine, is indispensable to health, and the imperfect or non performance of the same, constitutes disease, the severity of which will be proportionate to the importance and sympathies of the structure, in which it may be located. Of the various organs of the body, from the exercise of whose functions result the phenomena of life, there is no one so undeniably essential to vitality, so decidedly a sine qua non to the state of existence, as the stomach.

This viscus performs a most important role in the animal economy, and exercising a powerful influence over other parts of the system, is in its turn acted upon through the medium of its extended sympathies.

Thus possessed of the most important and multiplied relations to the system at large, its morbid affections

are correspondingly numerous and distressing.

We accordingly find it the most frequent seat of disease, a fruitful source whence spring "many of the ills that flesh is heir to". From the long catalogue of ailments to which it is subject, it is my purpose to select one upon which to make but a few remarks, as every thing relative to the subject under consideration, can be met with elsewhere more ably discussed.

Cholera as its etymology imports was formerly considered as the consequence of an increased secretion of bile, and its subsequent effusion into the alimentary canal. In order to account for the unnatural effect of its natural stimulus upon this canal, it became necessary to infer that with increased quantity, there was an unusual degree of acrimony, in the effused fluid. The advocates of this theory of the disease, it would appear have mistaken an effect for the cause, a symptom for the disease itself. To demonstrate this, and establish a correct view of the pathology of Cholera, an attentive obser-

vance of the symptoms causes and progress of an attack, is all that is requisite. Usually the first intimation received of the semina morbi having taken root in the stomach, is from a sense of sudden violent burning pain with distension and flatulence of this organ, accompanied by acute spasmodic griping of the bowels, quickly succeeded by severe vomiting and purging.

The discharge at first is merely the contents of the alimentary canal, but soon changes to one of pus bile. The pulse in the commencement weak and feeble, as the complaint progresses indicates by its diminished force the great prostration so invariably attendant.

Respiration becomes hurried and anxious, and the pro cordial uneasiness is very distressing. The tongue furred and loaded is a faithful index of the depraved condition of the stomach. The continuance of the attack occasions extreme depression of muscular powers, a cold clammy sweat breaks out, cramp seizes upon the abdomen and limbs, low muttering delirium super-

veins, and the intermittent and sinking pulse forewarns us of a fatal termination.

Throughout there is little or no fever, and evidence of it from increased arterial action, may be considered as prognostic of a favorable result. Appearances presented in post mortem examinations are an accumulation of bile in the alimentary canal, particularly in the duodenum, as also in every portion of the hepatic apparatus.

Alternate constriction and distension of the biliary ducts are observed, with the spleen liver and brain in a state of complete engorgement.

By many Cholera is looked upon as a form our autumnal bilious fevers, occurring at the same season, and arising from like causes. There are such as directly or indirectly subvert the healthy action of the stomach. Of the first may be enumerated ^{intemperate} ~~inordinate~~ indulgence in the pleasures of the table, cold drinks particularly when the body is heated by exercise, and in short ingestion of any kind if inordinate in quantity or quality.

The most common of the indirect causes, are such as by a primary impression upon the functions of the surface, implicate the stomach by what has been aptly termed *cutaneous gastric sympathy*. When the disorder prevails as an epidemic it is in that season of the year, in which frequent vicissitudes of temperature eminently predispose to gastro-enteric affections.

In sporadic cases, not evidently the effect of some one of the direct causes above mentioned, the complaint may generally be traced as the consequence of a disordered condition of the dermoid, transferred or extended to the mucous tissue. A cold or moist state of the atmosphere is thus a common promoter of the disease.

To obstruct perspiration by cold and moisture, especially when applied to the feet, much may be ascribed as a cause of Cholera. It is said to have been induced by a fit of anger, the reception of distressing intelligence, and various mental emotions. In these instances a predisposition to this malady probably existed.

Handwritten text in a cursive script, likely from a 17th or 18th-century manuscript. The text is written in a single column and appears to be a letter or a formal document. The ink is dark, and the paper shows signs of age and wear.

Whatever its origin so formidable is Cholera, and so rapidly does it progress to a fatal termination in some of its shapes, that the Arabic term mordaiche or death-blow (which says Dr Good has given rise to the corruption mort-de chien) is peculiarly significant of its character. Not unfrequently it attacks with such extreme violence, as from the commencement apparently to place the sufferer beyond the reach of medical aid, and render all curative measures utterly unavailing. Most authors until of late misled by a false theory, have recommended the practice of invariably prescribing the free exhibition of chamomile tea or other warm diluent, to assist vomiting and "cleanse the stuffed stomach of that perilous stuff which weighs upon its health.

This is sound practice when the lesion is in consequence of the direct action of a morbid agent upon the injured part, but the indications will be more promptly and effectually fulfilled by the administration of an emetic of Spicacouba.

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This having accomplished the desired end, any farther tendency to emesis must be suppressed as speedily as possible, by the most effectual antiemetic and anodyne treatment. Such however is the degree of prostration not unfrequently present, that emetics are evidently inadmissible, until by quieting irritation and spasm the system is enabled to recover somewhat of its lost energy. When the disorder has its origin in a morbid state of the surface, translated by consent of parts to the *Primæ viæ*, opium may be resorted to without any previous evacuation. From this medicine upon which chiefly we rely, but little advantage can be derived if given by the mouth, as it will probably be rejected so soon as swallowed. Should the irritability be not so extreme a pill of opium which has been some time prepared should be prescribed, and may be retained. As an enema this drug is productive of the happiest effects, and should never be omitted.

It will often quickly arrest vomiting and purging.

and prove of great utility in correcting the spasmodic diathesis. Failing to relieve by these measures, the lancet may be employed, and will be found a valuable auxiliary. Venesection it might appear, in a disease of which extreme debility is usually a concomitant, was most seriously to be deprecated. But experience has demonstrated it to be eminently serviceable in combating the distressing symptoms of Cholera. In the epidemic Cholera of the Indies it was ascertained that every case in which bleeding was early resorted to, was rendered tractable and terminated favorably.

It was exclusively relied on for allaying irritation of the stomach and intestines, resolving spasm, and removing the universal depression under which the system laboured.

The pulse our usual criterion as to the expediency of venesection is here to be distrusted. Notwithstanding apparent weakness of the circulation, should there be much pain and accompanying spasm, the remedy is venesection.

Prudence however dictates that we extract blood slowly, and carefully observe the effect of this depletion.

This will either be an increased frequency of pulsive discharges, relief from a state of oppression, and an amelioration of all the symptoms: Or else the feeble pulse will become still more so, and a general aggravation of distress determine the impropriety of the measure. Should circumstances render the fitness of this evacuation questionable, the warm bath should be substituted, which being premixed the system will open so much as to admit of venesection. The bath independent of its acknowledged antispasmodic virtues, relieves internal congestion, and is said greatly to assist the operation of opiates. The disposition to hyperæmia may be counteracted by the different antiemetic draughts, but opium must be considered preeminently useful in rectifying this perverted action, and for this purpose is to be administered largely per anum.

A cataplasm of camphor and opium, or a compound

and spirits of turpentine applied to the region of the stomach will sometimes revert its retrograde motions. The best effects have occasionally resulted from the application of opium to the epigastrium in the form of an embrocation.

From Dr Johnson in his interesting work on hepatic derangements we learn that colomet in small and often repeated doses is by some esteemed specific in the cure of cholera. Although it cannot be affirmed to possess any specific influence in checking the disorder, it nevertheless its utility is by no means inconsiderable. It should says Johnson never be omitted because it answers the triple purpose of allaying inordinate gastric irritability, of exciting the healthy action of the liver, and correcting the constipation consequent to the use of opium.

Should the above mentioned means prove ineffectual, it will be advisable to detract blood from the epigastric region by leeches or cups, and apply some

active counter-irritant to the same part.

Blisters and sinapisms are made use of, but the exigency of the case requiring the most prompt measures it may be better to employ Nitric Acid sufficiently diluted, or simply to scald the part with boiling water.

Blebs will speedily detach the cuticle, and the imposthume may be kept up by dusting the abraded surface with some stimulating powder, or smearing it with parin ointment. It has been proposed to restrain vomiting by mechanical means, so compressing the abdominal muscles that they cannot assist in this antiperistaltic process. By thus preventing the rejection of emetics, an opportunity is allowed them of accomplishing the end for which they were administered.

To sustain the sinking patient which we are soon enabled on to do, the free exhibition of the diffusible stimulant is necessary. The Spiritus Aetheris Ethici seems here peculiarly appropriate, though dependence should not be placed upon it alone.

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Having endeavoured successfully, to subdue the violence of the attack and calm the excitement of the *Prima Via*, it becomes expedient that a cathartic be prescribed. Calomel is allowed by common consent to merit a decided preference. It appears to exercise a sedative influence, unloads congested organs, and restores healthy secretion.

Though fortunate in obtaining a remission of the symptoms, a recurrence of them is to be apprehended as the effect of the opium wears away.

Hence it is proper to keep the invalid in some degree under its influence, until the general health seems to be established. To guard against a relapse all exciting causes should be sedulously avoided.

Exposure to heat or cold, cold or wet feet especially, or the slightest indiscretion in eating or drinking may subject the convalescent to a repetition of the disease. The bowels are to be kept in a palatable condition by Rhubarb or some other mild laxative.

Restore tone to the stomach by bitters tonics & and invigorate the general system by diet exercise the wear of flannel &c.

From what has been written the ideas of the writer as respects the pathology of cholera may be readily inferred: yet it may not be amiss that he should "give a reason for the belief which is in him". The framers of the medical creed adopted in this manuscript, adduce facts numerous and conclusive in support of the doctrine that the affection herein treated of, is primarily of gastric origin. Others contend that the hepatic derangement and consequent effusion of acrid bile into the *Prima via* gives rise to their diseased action.

To demonstrate the fallacy of the latter opinion, it is observed that the gastric irritation instead of being subsequent to, invariably precedes the effusion of bile. This fluid is not perceptible in the first discharges which are merely of ingesta and the natural contents of the alimentary canal. But soon the liver becoming

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implicated is stimulated to unnatural exertion, and pours out its secretion in such quantity and supposed quality as to have been mistaken for the cause and not effect of disease. Nor is it probable that the effused fluid is characterized by more than usual acrimony. On the contrary the inference is fair that it is more bland than in a healthy state, for it is discharged so soon as secreted, and thus prevented from becoming acid by the absorption of its aqueous portion. Finally, a convincing proof that the stomach is the *"Fons et Origo Mali"*, is the incontrovertible fact that an artificial cholera may be induced by impressions upon this viscus which can affect the liver only sympathetically.

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and power and its character is such generally and
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